



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/072,728

02/07/2002

Chester L. Schuler

IMM043E

2651

60140

7590

04/03/2008

IMMERSION -THELEN REID BROWN RAYSMAN & STEINER LLP  
P.O. BOX 640640  
SAN JOSE, CA 95164-0640

EXAMINER

KUMAR, SRILAKSHMI K

ART UNIT

PAPER NUMBER

2629

MAIL DATE

DELIVERY MODE

04/03/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/072,728	<b>Applicant(s)</b> SCHULER ET AL.	
	<b>Examiner</b> SRILAKSHMI K. KUMAR	<b>Art Unit</b> 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2008 and 08 February 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 19-25 and 27-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19-25 and 27-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/7/2008</u> .  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

The following office action is in response to the request for continued examination, filed on February 8, 2008. Claims 19-25, 27-33 are pending. Claims 19, 25 and 31 have been amended.

#### ***Information Disclosure Statement***

With respect to the Information Disclosure Statement, filed on January 7, 2008, Examiner has not considered the Foreign References and NPL Documents. Applicant has stated that these documents were previously submitted in the parent applications. However, these references are unavailable to the Examiner. Examiner, respectfully, requests Applicants to resubmit copies of these documents so that they may be reviewed and considered.

#### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 19-25, 27-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over McIntosh (US 5,103,404) in view of Applicant's Admitted Prior Art (AAPA).

In reference to claims 19, 25, 31 and 33, McIntosh teach a device comprising a moveable member (Fig. 2); an actuator having a user interface (col. 4, lines 37-41), the actuator being configured to output haptic feedback (col. 4, lines 37-41), the haptic feedback including a modulating force (col. 2, lines 49-54, col. 3, lines 1-30); a data storage component configured to store torque data associated with the haptic feedback (col. 10, lines 46-53), the torque data being associated with a plurality of force profiles (col. 2, lines 49-54), the torque data being provided

Art Unit: 2629

by a host computer (col. 10, lines 24-25) based on a selection of at least one force profile from the plurality of force profiles (col. 10, lines 24-25); a sensor coupled to the moveable member (col. 7, lines 50-57), the sensor being configured to send position information associated with a position of the moveable member (col. 7, lines 50-57); a local controller coupled to the data storage component (RAM and ROM) and the actuator (Fig. 10), the local controller being configured to be in communication with the host computer (col. 10, lines 24-25); the local controller being configured to send a control signal to the actuator, the control signal being based on data values associated with a host software application of the host computer, the haptic feedback simulating a plurality of electronically defined stop positions being associated with the position information and the host software application (in column 2, lines 49-54, McIntosh teaches that the “the motion of (the) motor, is determined by either operator controlled movements of the control motor or preprogrammed motion instructions” i.e. a force profile. More specifically, he teaches “the manipulator motor is driven to its desired position as determined by the control motor, or in some cases, preprogrammed instructions” and “that the system provides a readily programmable degree of coupling between the two motors” in column 3, lines 1-30).

McIntosh does not disclose wherein the haptic feedback including a modulating force simulating a plurality of electronically defined stop positions. Applicant’s Admitted Prior Art on page 2, line 17-page 3, line 5 teach where it is well known in the art where haptic feedback devices have control wheel that exhibit tactile responsiveness, such as detents or clicks as they are rotated, wherein each click is a modulating force simulating a plurality of electronically defined stop positions, such that each click corresponds to one frame. Therefore, it would have

Art Unit: 2629

been obvious to include in McIntosh the modulating force simulating a plurality of electronically defined stop positions as taught by AAPA, as the stop positions enable the user to determine frame rates as discussed on pages 2 and 3 of applicant's specification.

In reference to claim 20, McIntosh teaches the actuator being a first actuator (first motor), the device further comprising a second actuator (second motor), the local controller being configured to output the control signal to the first and second actuators, the first and second actuators configured to produce the haptic feedback (column 2, lines 42-43, the first and second actuators are taught by the use of the two motors which further provide haptic feedback the use of two motors for performing feedback).

In reference to claim 21, McIntosh teaches wherein the data storage component is configured to receive and store a plurality of torque value from the host computer (in col. 10, lines 5-8, where the data storage component is capable of storing and recalling information, and in col. 4, lines 37-41, where different levels of selected forces are associated with different types of feedback sensations).

In reference to claims 22 and 32, in column 4, lines 37-41, McIntosh teaches wherein each of the torque values is associated with a different tactile sensation (in col. 10, lines 5-8, where the data storage component is capable of storing and recalling information, and in col. 4, lines 37-41, where different levels of selected forces are associated with different types of feedback sensations). .

In reference to claims 23 and 28, as shown in figure 10, McIntosh teaches the data storage component is external to the local controller (col. 10, lines 5-8).

In reference to claims 24 and 29, as shown in figure 10, McIntosh does not explicitly state wherein the data storage component is resident on the local controller. McIntosh teaches the RAM and ROM components are external to the microprocessor (item 61). However, Examiner takes Official Notice that the data storage component is resident on the local controller is well known in the art. It would have been obvious for one skilled in the art to include a controller with an internal storage component in order to reduce the number of parts needed to fabricate the invention. This feature of where the RAM and ROM are internal to the processor is evidenced by Sanderson (US 4,768,412) in col. 10, lines 56-66 where a microprocessor is taught to internally include the RAM and ROM.

In reference to claim 27, McIntosh teaches that the moveable member is a portion of an actuator (column 4, lines 37-41).

In reference to claim 30, McIntosh's storage component (figure 10, item 65) receives data from a remote processor (item 26).

### ***Response to Arguments***

3. Applicant's arguments filed August 20, 2007 have been fully considered but they are not persuasive.

Applicant argues on page 6 of the response where the previous office action was prematurely made final because the rejection of claim 20 had been changed without any amendments to the claim. Examiner, respectfully, disagrees. The rejection to claim 20 was not changed, but actually explanation of the rejection was made for clarity. As applicant has filed a Request for Continued Examination, thus the above arguments are moot.

In regards to the IDS, applicant states where the NPL documents were provided in the parent application, therefore do not have to be resubmitted. As stated above, the references cited in the IDS statement are unavailable to the examiner. Examiner, respectfully, requests the applicant to resubmit copies of the documents for review and consideration.

With respect to applicant's arguments of where "the features alleged to be taught by McIntosh are wholly absent from its teachings", as shown in the rejection above, a secondary reference of the Applicant's Admitted Prior Art is combined to show the deficiencies of McIntosh.

With respect applicant's arguments in regards to applicant's arguments of where in the previous office action it is asserted that McIntosh doesn't teach wherein the haptic feedback including a modulating force simulating a plurality of electronically defined stop positions, and then asserted that McIntosh does teach this feature, examiner, respectfully, disagrees. McIntosh teaches in col. 2, lines 49-54, col. 3, lines 1-30 where "the motion of (the) motor, is determined by either operator controlled movements of the control motor or preprogrammed motion instructions" i.e. a force profile. More specifically, he teaches "the manipulator motor is driven to its desired position as determined by the control motor, or in some cases, preprogrammed instructions" and "that the system provides a readily programmable degree of coupling between the two motors" in column 3, lines 1-30, which corresponds to the limitation of the local controller being configured to send a control signal to the actuator, the control signal being based on data values associated with a host software application of the host computer. What McIntosh fails to teach is the limitation of including a modulating force simulating a plurality of electronically defined stop positions. In order to remedy McIntosh's deficiency, applicant's

Art Unit: 2629

admitted prior art (AAPA) teaches on page 2, line 17-page 3, line 5 teach where it is well known in the art where haptic feedback devices have control wheel that exhibit tactile responsiveness, such as detents or clicks as they are rotated, wherein each click is a modulating force simulating a plurality of electronically defined stop positions such that clicks are felt based on electrical input and electrical contacts, such that each click corresponds to one frame. Further, the haptic feedback device with its mechanical components, must have electrical signal generation, thus teaching electronically defined stop positions. With respect to applicant's arguments where the prior art of McIntosh does not teach torque data and force profiles, this is shown in col. 2, lines 49-54. Further applicant on page 10 of the response states that McIntosh is relevant to these features. With respect to dependent claim 20, applicant argues that the use of two motors for a first and second actuator is an inaccurate interpretation of McIntosh. Examiner, respectfully, disagrees. McIntosh teaches using two motors in order to provide haptic feedback. Further, applicant cites col. 5, line 24, however line 24 doesn't state where the second actuator is just load, and doesn't have haptic feedback. Thus, the combination of McIntosh and Applicant's Admitted Prior Art teach the limitations set forth in the instant application.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SRILAKSHMI K. KUMAR whose telephone number is (571)272-7769. The examiner can normally be reached on 9:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sue Lefkowitz can be reached on 571 272 3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 2629

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Srilakshmi K Kumar/  
Patent Examiner, Art Unit 2629

Srilakshmi K Kumar  
Examiner  
Art Unit 2629

SKK  
March 28, 2008